

whereby identity authentication is based upon a comparison of either the captured fingerprint or thumbprint against a reference print, such identity authentication being independent of the text images; and

whereby the text images generated by the stylus are downloadable from the scanned text images retained in the processor memory within the stylus.

20 (New). An identity authentication device having the general shape of a stylus, the identity authentication device comprising:

a sensor enabling the capture of a fingerprint or a thumbprint as the stylus is generating text images upon a surface, the fingerprint or thumbprint enabling identity authentication of a person doing the writing, the text images being a signature or non-signature images; and

a processor having memory, processor memory being disposed with the stylus, the stylus including a scanner-type device, the scanner-type device for scanning text images generated by the stylus upon the surface, all of the text images being captured in processor memory as the writing is generated by the stylus, the processor memory retaining the text images generated by the stylus upon the surface;

whereby identity authentication is based upon a comparison of either the captured fingerprint or thumbprint against a reference print, such identity authentication being independent of the text images.

21 (New). The identity authentication device of Claim 20, wherein the text images generated by the stylus are downloadable from the scanned text images retained in the processor memory within the stylus.

22 (New). An identity authentication device having the general shape of a stylus, the stylus having a stylus tip, the identity authentication device comprising:

a sensor enabling the capture of a fingerprint or a thumbprint as the stylus is generating text images upon a writing surface, the fingerprint or thumbprint enabling identity authentication of the person doing the writing, the text images being a signature or non-signature images,; and

a processor having memory, processor memory being disposed with the stylus, the processor tracking the position of the stylus tip as the text images are being generated upon the writing surface, the position of the stylus tip relative to the surface being tracked by infrared emissions received by the stylus and stored in the processor memory as the writing is generated by the stylus;

whereby identity authentication is based upon a comparison of the captured fingerprint or thumbprint against a reference print, such identity authentication being independent of the text images.

23 (New). The identity authentication device of Claim 22, wherein the text images generated by the stylus are downloadable from the scanned text images retained in the processor memory within the stylus.

REMARKS

Applicants thanks the examiner for the careful and thorough examination of the present application.

In the Office Action of June 29, 2004, the examiner rejected all eighteen (18) pending claims under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,728,881 (Karamchetty). The Office Action of June 29, 2004, was carefully reviewed. Applicant was unaware of the '881 reference since it issued after the present application was filed. To highlight the distinctions between Applicant's invention and the '881 reference, Claims 1 through 18 are being cancelled, and replaced by new Claims 19, 20, and 21. No new matter is being presented and entry thereof is respectfully requested.

It is respectfully requested that the Examiner reconsider the present application and claims as currently pending in view of the following remarks.

The identity authentication device of the present invention is stylus-shaped and a fingerprint sensor is disposed within the grip of the stylus. A processor is disposed within the identity authentication device. The stylus-shaped device includes a scanner-type device component for capturing within the processor memory a signature, or any other writing, generated by the stylus on a surface as the writing is being generated. The fingerprint sensor enables the capture of any written text generated by the writer. Once the identity of the writer has been authenticated by comparison against a reference print, the signature of the writer becomes irrefutable. This is accomplished without the need to preserve a copy of the text image on the surface, since the text image is retained in processor memory within the stylus. While the stored images can be signatures, the device is much broader than that, since any written image can be stored.

U.S. Patent No. 6,728,881 (Karamchetty) discloses an authorization system that employs card and signature devices to provide access to a machine. An alternative embodiment shows a stylus replacing the card. The devices include capacitance grids positioned on different surface regions of the card or stylus to convert fingerprint images of at least two fingers into electrical signals. An images processor in the device processes the electrical signals detected from the fingerprints to produce electrical images of the user's fingerprints. An authenticating processor compares the user's fingerprints detected on the capacitance grids with authorized user's previously recorded fingerprint's and the user's name and identification data to produce an authenticating signal if there is a match of the fingerprint images. Signature storage and identification can be provided to store and authenticate the user's electronic signature.

The test for determining if a reference anticipates a claim, for purposes of rejection under 35 U.S.C. Section 102, is whether the reference discloses all of the elements of the claimed combination, or the mechanical equivalents, functioning in substantially the same way to produce substantially the same results. As noted by the Court of Appeals of the Federal Circuit in *Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick*, 221 USPQ 481, 485 (1984), in evaluating the sufficiency of an anticipation rejection under 35 U.S.C. Section 102, the Court stated:

"Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim."

New independent Claim 19 requires that identity authentication is based upon a comparison of a fingerprint or thumbprint against a reference print only. There is no matching of signatures. The device is not used to match signatures but rather to

AMENDATORY RESPONSE

retrieve text stored within processor memory within the stylus. Also, new Claim 19 requires that the text images generated by the stylus are downloadable from the scanned text images retained in the processor memory within the stylus. These features are not taught or disclosed in the '881 patent.

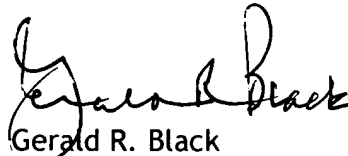
New independent Claim 20 requires that the stylus include a scanner-type device, for scanning text images generated by the stylus upon the surface. Claim 20 also requires that identity authentication be based upon a comparison of a fingerprint or thumbprint against a reference print only, without matching signatures. These features are not taught or disclosed in the '881 patent.

New independent Claim 22 requires that the position of the stylus tip relative to the surface is tracked by infrared emissions received by the stylus and stored in the processor memory as the writing is generated. Claim 22 also requires that identity authentication be based upon a comparison of a fingerprint or thumbprint against a reference print only, without matching signatures. These features are not taught or disclosed in the '881 patent.

In view of the foregoing remarks, it is respectfully submitted that Claims 19 through 23 are now in condition for allowance. If after reviewing this Response, there are any remaining informalities, which need to be resolved before the application can be passed to issue, the examiner is respectfully requested to contact the undersigned by telephone in order to resolve such informalities.

April 10, 2005

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gerald R. Black". The signature is fluid and cursive, with the first name "Gerald" and last name "Black" clearly distinguishable.

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